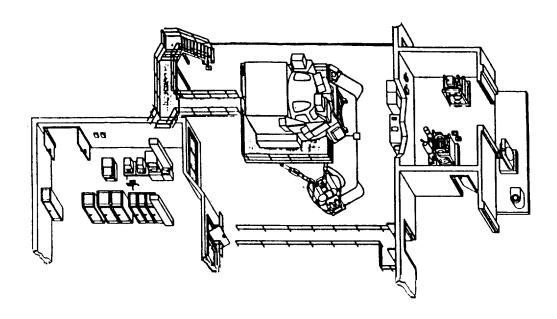
# DEVICE 2F121 DIRECTORY OF NAVAL TRAINING DEVICES



# CH-53D OPERATIONAL FLIGHT TRAINER, DEVICE 2F121

# TRAINING CATEGORY:

AVIATION (Operational Flight Weapon Systems)

#### ORIGINATING AGENCY:

DCNO/AIR

#### SECURITY CLASSIFICATION:

Device 2F121 less databases is unclassified. Device 2F121 with databases is SECRET.

#### **PURPOSE OF DEVICE:**

To provide for increased proficiency of CH-53D pilots by simulation of the following operations: normal/emergency procedures (air, land, and shipboard), preflight, startup, takeoff, maneuvers, instrument flight, loading operations, landing, shutdown, and postflight.

#### INTENDED USE:

In Marine Corp Air Stations for familiarization and refresh training of pilot/copilots.

#### FUNCTIONAL DESCRIPTION:

Device 2F121 simulates the response of CH-53D controls, instruments, and systems, to include the, aural, motion, visual, and force-feel sensations.

The Computational System consists of a Gould Concept 32/77 computer and its peripherals: dual operator terminals; magnetic tape unit; two 80MB fixed disks; and printer/plotter. These units, through Instructor/Trainee inputs to the simulation software database, output digital/analog signals to reconfigure cockpit equipment and visual/motion/aural equipment.

The reconfiguration is performed many times a second, is transparent to the Trainee, and ensures that visual, motion, aural, and flight control operations are in concert.

Maintenance/troubleshooting requirements are supported by on-line and off-line computer implemented diagnostic tests.

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# PHYSICAL INFORMATION:

The Trainer has 31 units of various sizes: smallest =  $24 \times 24 \times 24$ , largest =  $130 \times 90 \times 70$ , and on average =  $20 \times 25 \times 48$  Inches. Together, the units weigh (including cables) about 35,500 pounds. Total system heat generated (Including Personnel) is about 95,000 BTU/HR.

## OPERATIONAL EQUIPMENT:

Clock (ABU-9A), ICS Panels (AIC-14), ADF Control Panel (C7392/ARN89A), IFF Control Panel (C6280P/APX), KY-58 SVU (C-10320), and APP Temperature Indicator.

# **POWER REQUIREMENTS:**

120/208-volt, 60 Hz, 3-phase, 85% PF, 150 amps; 277/480-volt, 60 Hz, 3-phase, 85% PF, 400 amps.

# INSTALLATION REQUIREMENTS:

Min Installation Area:

2,433 Sq. Ft

Ambient Temperature: Relative Humidity:

73° F 55%

Overhead Lighting:

150 lm/Sq Ft 90 dB max

Utility Area Noise: All other Area Noise:

70 dB max

### **PUBLICATIONS FURNISHED:**

- 1. Technical Manual, Operator and Maintenance Instructions, CH-53D Operational flight Trainer, Device 2F121, NTSC P-4838 (U).
- Planned Maintenance System (PMS), CH-53D Operational Flight Trainer, Device 2F121, NTSC P-4839 (U).
- **Commercial Computer Documentation Set** for the CH-53D Operational Flight Trainer, Device 2F121, NTSC P-4840 (U).

- 4. Technical Manual, Instructor's Utilization Handbook, CH-53D Operational Flight Trainer, Device 2F121, NTSC P-4918 (U).
- 5. Technical Manual, On-The-Job Training Handbook, CH-53D Operational Flight Trainer, Device 2F121, NTSC P-5187 (U).

#### PERSONNEL:

Instructors:

One (1), Instructor Pilot qualified

in CH-53D Aircraft Operations.

Operators:

None, device is Instructor Pilot

operated.

Trainees:

Class of 1 or 2 consisting of Pilot

and/or Copilot.

Maintenance: Two (2), journeyman level elec-

tronics technicians, 40 hour/week

each.

# CONTRACT IDENTIFICATION:

Manufactured by Sperry Corporation, Reston, VA, under NAVTRASYSCEN Contract No. N61339-79-C-0079.

#### LOCAL STOCK NUMBER:

6930-LL-C00-4388